

Dr. habil. PABLO DOMÍNGUEZ de MARÍA

PUBLICATION LIST

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(*): As corresponding Author

2017

105.- Domínguez de María, P.*, Guajardo, N. "Biocatalytic valorization of furans: Opportunities for inherently unstable substrates". *ChemSusChem*. **2017**. Accepted.

104.- Damm, T., Grande, P.M., Jabloknowski, N.D., Thiele, B., Disko, U., Mann, U., Schurr, U., Leitner, W., Usadel, B., **Domínguez de María, P.**, Klose, H. "OrganoCat pretreatment of perennial plants: Synergies between a biogenic fractionation and valuable feedstocks". *Bioresource Technology* **2017**, 244, 889-996.

103.- Picart, P., Liu, H., Grande, P.M., Anders, N., Zhu, L., Klankermayer, J., Leitner, W., **Domínguez de María, P.**, Schwaneberg, Schallmey, A. "Multi-step biocatalytic depolymerization of lignin". *Applied Microbiology and Biotechnology*. **2017**, 101, 6277-6287.

102.- Guajardo, N., **Domínguez de María, P.**, Ahumada, K., Schrebler, R.A., Ramírez-Tagle, R., Crespo, F., Carlesi, C. "Water as cosolvent: Non-viscous Deep-Eutectic-Solvents for efficient lipase-catalyzed esterifications". *ChemCatChem*. **2017**, 9, 1393-1396.

101.- Hernández, K., Bujons, J., Joglar, J., Charnock, S., **Domínguez de María, P.**, Fessner, W.D., Clapés, P. "Combining aldolases and transaminases for the synthesis of 2-amino-4-hydroxybutanoic acid". *ACS Catalysis*. **2017**, 7, 1707-1711.

100.- Domínguez de María, P.* "Ionic Liquids, switchable solvents and eutectic mixtures". In: "The application of green solvents in separation processes", F.J. Pena-Pereira, M. Tobiszewski (Eds). Elsevier, the Netherlands. **2017**, Chapter 6, pp. 139-154.

99.- Bracco, P., **Domínguez de María, P.*** “Organic carbonates: Promising reactive solvents for Biorefineries and Biotechnology”. In: “*Bio-based Solvents*”, F. Jerome, R. Luque (Eds). John Wiley & Sons, UK. **2017**, Chapter 5, pp. 115-130.

2016

98.- Weiz, G., Braun, L., López, R., **Domínguez de María, P.**, Breccia, J.D. “Enzymatic deglycosylation of flavonoids in deep eutectic solvents – aqueous mixtures: Paving the way for sustainable flavonoid synthesis”. *Journal of Molecular Catalysis B: Enzymatic*. **2016**, 130, 70-73.

97.- Picart, P., Wiermans, L., Pérez-Sánchez, M., Grande, P.M., Schallmey, A.*, **Domínguez de María, P.*** “Assessing lignin types to screen novel biomass-degrading microbial strains: Synthetic lignin as useful carbon source”. *ACS Sust. Chem. & Eng.* **2016**, 4, 651-655.

96.- Guajardo, N., Müller, C.R., Schrebler, R., Carlesi, C., **Domínguez de María, P.*** “Deep-Eutectic-Solvents for organocatalysis, biotransformations and multi-step organocatalyst-enzyme combinations”. *ChemCatChem* **2016**, 8, 1020-1027.

2015

95.- **Domínguez de María, P.***, Hollmann, F.* “On the (un)greenness of biocatalysis: Some challenging figures and some promising options”. *Front. Microbiol.* **2015**, 6, 1257.

94.- **Domínguez de María, P.***, Grande, P.M., Leitner, W. “Current trends on pretreatment and fractionation of lignocellulose as reflected in industrial patent activities”. *Chemie Ing. Technik*. **2015**, 87, 1686-1695.

93.- Picart, P., Domínguez de María, P., Schallmey, A. "From gene to biorefinery: Microbial β -etherases as promising biocatalysts for lignin valorization". *Front. Microbiol.* **2015**, 6, 916.

92.- Picart, P., Sevenich, M., Domínguez de María, P., Schallmey, A. "Exploring glutathione lyases as biocatalysts: paving the way for enzymatic lignin depolymerization and future stereoselective applications". *Green Chemistry.* **2015**, 17, 4931-4940.

91.- Müller, C.R., Rosen, A., Domínguez de María, P.* "Multi-step enzyme-organocatalyst C-C bond forming reactions in Deep-Eutectic-Solvents: Towards improved performances by organocatalyst design". *Sustainable Chemical Processes.* **2015**, 3, 12.

90.- Müller, C.R., Lavandera, I.*, Gotor-Fernández, V.*, Domínguez de María, P.* "Performance of recombinant whole-cell-catalyzed reductions in deep eutectic solvents – aqueous mixtures". *ChemCatChem.* **2015**, 7, 2654-2659.

89.- Grande, P.M., Viell, J., Theyssen, N., Marquardt, W., Domínguez de María, P.*, Leitner, W.* "Fractionation of lignocellulosic biomass using the OrganoCat process". *Green Chemistry* **2015**, 17, 3533-3539.

88.- Donnelly, J., Müller, C.R., Wiermans, L., Chuck, C.J.*, Domínguez de María, P.* "Upgrading biogenic furans: blended C₁₀-C₁₂ platform chemicals via lyase-catalyzed carboligations and formation of novel C₁₂ choline chloride-based deep eutectic solvents". *Green Chemistry.* **2015**, 17, 2714-2718.

87.- Wiermans, L., Schumacher, H., Klaassen, C.M., Domínguez de María, P.* "Unprecedented catalyst-free lignin dearomatization with hydrogen peroxide and dimethyl carbonate". *RSC Advances.* **2015**, 5, 4009-4018.

86.- Petrenz, A., Domínguez de María, P., Ramanathan, A., Hanefeld, U., Ansorge-Schumacher, M.B., Kara, S. "Medium and reaction engineering for the establishment of a chemo-enzymatic dynamic kinetic resolution of rac-benzoin in batch and continuous mode". *Journal of Molecular Catalysis B: Enzymatic.* **2015**, 114, 42-49.

2014

85.- Domínguez de María, P.* “Fermentations and sustainable technologies: From free enzymes to whole cells, from fine chemicals to bulk commodities”. In “*Chemical processes for a sustainable future*”. T. Letcher, J. Scott, D.A. Patterson (Eds), Royal Society of Chemistry (RSC), UK. **2014**, pp. 365-385.

84.- Yan, Q., Myazek, K., Grande, P., **Domínguez de María, P.**, Leitner, W., Modigell, M. “Mechanical pretreatment in a screw press affecting chemical pulping of lignocellulosic biomass”. *Energy & Fuels*. 2014, 28, 6981-6987.

83.- Domínguez de María, P.* “Deep Eutectic Solvents: Promising solvents and non-solvent solutions for biocatalysis”. In “*Environmentally friendly syntheses using ionic liquids*”. J. Dupont, T. Itoh, P. Lozano, S. Malhotra (Eds). CRC Press Taylor & Francis Group. **2014**, pp. 67-87.

82.- Müller, C. Meiners, I., **Domínguez de María, P.*** “Highly enantioselective tandem enzyme-organocatalyst crossed aldol reactions with acetaldehyde in deep eutectic solvents”. *RSC Advances*. **2014**, 4, 46097-46101.

81.- Picart, P., Müller, C., Mottweiler, J., Bolm, C., **Domínguez de María, P.**, Schallmey, A. “From gene towards selective biomass valorization: Novel bacterial β -etherases with activity on lignin-like polymers”. *ChemSusChem* **2014**, 7, 3164-3171.

80.- Maugeri, Z., **Domínguez de María, P.*** “Benzaldehyde Lyase (BAL)-catalyzed enantioselective C-C bond carbonylation in deep eutectic solvents – buffer mixtures”. *Journal of Molecular Catalysis B: Enzymatic* **2014**, 107, 120-123.

79.- Gaménara, D.*, **Domínguez de María, P.*** “Enantioselective imine reduction catalyzed by imine reductases and artificial metalloenzymes”. *Organic & Biomolecular Chemistry* **2014**, 12, 2989-2992.

78.- Maugeri, Z., **Domínguez de María, P.*** “Whole-cell biocatalysis in deep-eutectic-solvents – aqueous mixtures”. *ChemCatChem* **2014**, 6, 1535-1537.

77.- Fernández-Álvaro, E., Esquivias, J., Pérez-Sánchez, M., **Domínguez de María, P.**, Remuñan-Blanco, M. “Assessing biocatalysis for the synthesis of optically active tetrahydropyrazolo[1,5-a] pyrimidines (THPPs) as novel therapeutic agents”. *Journal of Molecular Catalysis B: Enzymatic* **2014**, 100, 1-6.

76.- Domínguez de María, P.* “Recent trends in (ligno)cellulose dissolution using neoteric solvents: Switchable, distillable and bio-based ionic liquids”. *Journal of Chemical Technology and Biotechnology* **2014**, 89, 11-18.

75.- Kayser, H., Pienkoß, F., **Domínguez de María, P.*** “Chitosan-catalyzed biodiesel synthesis: Proof-of-concept and limitations”. *Fuel*. **2014**, 116, 267-272.

2013

74.- Wiermans, L., Hofzumahaus, S., Schotten, C., Weigand, L., Schallmeyer, M., Schallmeyer, A., **Domínguez de María, P.*** “Transesterifications and peracid-assisted oxidations in aqueous media catalysed by *Mycobacterium smegmatis* acyl transferase”. *ChemCatChem* **2014**, 12, 3719-3724.

73.- Schallmeyer, A., **Domínguez de María, P.**, Bracco, P. “Biocatalytic asymmetric oxidations in stereoselective synthesis”. In “*Stereoselective synthesis of drugs & natural products*”. V. Andrushko, N. Andrushko (Eds). Wiley-Blackwell. John Wiley & Sons Inc. **2013**, pp. 1089-1114.

72.- Pérez-Sánchez, M., **Domínguez de María, P.*** “Synthesis of natural fragrance jasminaldehyde using silica-immobilized piperazine as organocatalyst”. *Catalysis Science & Technology*. **2013**, 3, 2732-2736.

71.- Maugeri, Z., Leitner, W. **Domínguez de María, P.*** “Chymotrypsin-catalyzed peptide synthesis in Deep-Eutectic-Solvents”. *European Journal of Organic Chemistry*. **2013**, 4223-4228.

70.- Kayser, H., Rodríguez-Roperro, F., Leitner, W., Fioroni, M.*, **Domínguez de María, P.*** “Mechanistic comparison of saccharide depolymerization catalyzed by dicarboxylic acids and glycosidases”. *RSC Advances*. **2013**, 3, 9273-9278.

69.- Sibilla, F., **Domínguez de María, P.*** “Integrating White Biotechnology in lignocellulosic biomass transformations: From enzyme-catalysis to metabolic engineering”. In: “*The role of catalysis for the sustainable production of bio-fuels and bio-chemicals*”. A. Lappas, M. Stöcker, K. Triantafyllidis (Eds). Elsevier. **2013**, pp. 445-466.

68.- Pérez-Sánchez, M., Müller, C.R., **Domínguez de María, P.*** “Multi-step oxidase-lyase reactions: Synthesis of optically active 2-hydroxy-ketones using bio-based aliphatic alcohols”. *ChemCatChem*. **2013**., 5, 2512-2516.

67.- Fernández-Álvaro, E., **Domínguez de María, P.*** “Reductases: From natural diversity to established biocatalysis and to emerging enzymatic activities”. In “*Synthetic methods for biologically active molecules: Exploring the potential of bioreductions*”. (Ed. E. Brenna). Wiley, Weinheim. **2013**, pp. 22-47.

66.- Krystof, M., Pérez-Sánchez, M., **Domínguez de María, P.*** “Lipase-mediated selective oxidation of furfural and 5-Hydroxymethylfurfural”. *ChemSusChem*. **2013**, 6, 826-830.

65.- **Domínguez de María, P.*** “On the use of seawater as reaction media for large-scale applications in biorefineries”. *ChemCatChem*. **2013**, 5, 1643-1648.

64.- Krystof, M., Pérez-Sánchez, M., **Domínguez de María, P.*** “Lipase-catalyzed (trans)esterification of 5-hydroxymethylfurfural and separation of HMF-esters using deep-eutectic-solvents”. *ChemSusChem*. **2013**, 6, 630-634.

63.- Pérez-Sánchez, M., Sandoval, M., Hernáiz, M.J.*, **Domínguez de María, P.*** “Biocatalysis in biomass-derived solvents: The quest for fully sustainable chemical processes”. *Current Organic Chemistry*, **2013**, 17, 1188-1199.

62.- Wiermans, L, Pérez-Sánchez, M., **Domínguez de María, P.*** “Lipase-mediated oxidative delignification in non-aqueous media: Formation of de-aromatized lignin-oil and cellulase accesible polysaccharides”. *ChemSusChem*. **2013**, 6, 251-255.

61.- Müller, C.R., Pérez-Sánchez, M., **Domínguez de María, P.*** “Benzaldehyde-lyase-catalyzed diastereoselective C-C bond formation by simultaneous carboligation and kinetic resolution”. *Organic & Biomolecular Chemistry*. **2013**, 11, 2000-2004.

2012

60.- Maugeri, Z., Leitner, W., **Domínguez de María, P.*** “Practical separation of alcohol-ester mixtures using deep-eutectic-solvents”. *Tetrahedron Letters* **2012**, 53, 6968-6971.

59.- Shanmuganathan, S., Natalia, D., Greiner, L., **Domínguez de María, P.** “On the use of 2-methyltetrahydrofuran (2-MeTHF) as bio-based (co)solvent in biotransformations”. In: “*Practical methods in biocatalysis and biotransformations*”. P. Sutton, J. Whittall (Eds). Wiley-VCH, Weinheim. **2012**, Vol II, 263-295.

58.- Palazzolo, M.A., Pérez-Sánchez, M., Iribarren, A.M., Lewkowicz, E.S.*, **Domínguez de María, P.*** “Organocatalytic synthesis of novel purine and pyrimidine acyclic nucleosides”. *Tetrahedron Letters*. **2012**, 53, 6797-6800.

57.- Kayser, H., Müller, C.R., García-González, C., Smirnova, I., Leitner, W., **Domínguez de María, P.*** “Dried chitosan-gels as organocatalysts for the production of biomass-derived platform chemicals”. *Applied Catalysis A: General*. **2012**. 445-446, 180-186.

56.- Lehmann, C., Sibilla, F., Maugeri, Z., Streit, W.R., **Domínguez de María, P.**, Martínez, R., Schwaneberg, U. "Reengineering CelA2 cellulase for hydrolysis in aqueous solutions of deep-eutectic-solvents and concentrated seawater". *Green Chemistry*, **2012**, 14, 2719-2726.

55.- Fernández-Álvaro, E., **Domínguez de María, P.*** "Ionic Liquids in biocatalytic oxidations: From non-conventional media to non-solvent applications". *Current Organic Chemistry*, **2012**, 16, 2492-2507.

54.- **Domínguez de María, P.**, Kohlmann, C. "Non-solvent applications of ionic liquids in biotransformations". In "*Ionic Liquids in Biotransformations & Organocatalysis: Solvents and Beyond*". P. Domínguez de María (Ed). John Wiley & Sons Inc., Hoboken, (NJ, USA). **2012**, Chapter 8, pp. 315-329.

53.- Gamenara, D., Sáenz-Méndez, P., Seoane, G. **Domínguez de María, P.** "Ionic liquids as (co-)solvents for non-hydrolytic enzymes". In "*Ionic Liquids in Biotransformations & Organocatalysis: Solvents and Beyond*". P. Domínguez de María (Ed). John Wiley & Sons Inc., Hoboken, (NJ, USA). **2012**, Chapter 6, pp. 229-259.

52.- **Domínguez de María, P.** "Ionic liquids: Definition, applications and context for biotransformations and organocatalysis". In "*Ionic Liquids in Biotransformations & Organocatalysis: Solvents and Beyond*". P. Domínguez de María (Ed). John Wiley & Sons Inc., Hoboken, (NJ, USA). 2012, Chapter 1, pp. 3-14.

51.- Grande, P.M., Bergs, C., **Domínguez de María, P.*** "Chemo-enzymatic conversion of glucose into 5-Hydroxymethylfurfural in seawater". *ChemSusChem*. **2012**, 5, 1203-1206.

50.- Pérez-Sánchez, M., **Domínguez de María, P.*** "Lipase-catalyzed *in situ* production of acetaldehyde: A controllable and mild strategy for multi-step reactions". *ChemCatChem*, **2012**, 4, 617-619.

49.- Klement, T., Milker, S., Jäger, G., Grande, P.M., **Domínguez de María, P.**, Büchs, J. "Biomass pretreatment affects *Ustilago maydis* in producing itaconic acid". *Microbial Cell Factories*, **2012**, 11, 43.

48.- Pace, V.*, Hoyos, P., Castoldi, L., **Domínguez de María, P.***, Alcántara, A.R.* "2-Methyl-tetrahydrofuran (2-MeTHF): A biomass-derived solvent with broad application in organic chemistry". *ChemSusChem*. **2012**, 5, 1369-1379.

47.- Shanmuganathan, S., Natalia, D., Greiner, L.*, **Domínguez de María, P.*** "Oxidation-Hydroxymethylation-Reduction: A one-pot three-step biocatalytic synthesis of optically active α -aryl vicinal diols". *Green Chemistry*. **2012**, 14, 94-97.

46.- Maugeri, Z., **Domínguez de María, P.*** "Novel choline-chloride-based deep-eutectic-solvents with renewable hydrogen bond donors: Levulinic acid and sugar-based polyols". *RSC Advances*. **2012**, 2, 421-425.

45.- Grande, P.M., **Domínguez de María, P.*** "Enzymatic hydrolysis of microcrystalline cellulose in concentrated seawater". *Bioresource Technology*, **2012**, 104, 799-802.

2011

44.- Jakoblinnert, A., Mladenov, R., Paul, A., Sibilla, F., Schwaneberg, U., Ansorge-Schumacher, M.B.*, **Domínguez de María, P.*** "Asymmetric reduction of ketones with recombinant *E. coli* whole cells in neat substrates". *Chemical Communications*, **2011**, 47, 12230-12232.

43.- vom Stein, T., Grande, P.M., Leitner, W.*, **Domínguez de María, P.*** "Iron-catalyzed furfural production in bio-based biphasic systems: From pure sugars to direct use of crude xylose effluents as feedstock". *ChemSusChem*. **2011**, 4, 1592-1594.

42.- Medici, R., **Domínguez de María, P.**, Otten, L.G., Straathof, A. "A high-throughput screening assay for amino acid decarboxylase activity". *Advanced Synthesis & Catalysis*. **2011**, 353, 2369-2376.

41.- **Domínguez de María, P.*** “Nitrile reductases: A forthcoming wave in biocatalysis?”. *ChemCatChem*. **2011**, 3, 1683-1685.

40.- Kourist, R., **Domínguez de María, P.**, Miyamoto, K. “Biocatalytic strategies for the asymmetric synthesis of profens – recent trends and developments”. *Green Chemistry*. **2011**, 13, 2607-2618.

39.- vom Stein, T., Grande, P.M., Kayser, H., Sibilla, F., Leitner, W.*, **Domínguez de María, P.*** “From biomass to feedstock: One-step fractionation of lignocellulose components by selective organic-acid catalyzed depolymerization of hemicellulose in a biphasic system”. *Green Chemistry*. **2011**, 13, 1772-1777.

38.- **Domínguez de María, P.** “Procesos industriales biocatalizados”. In *Fundamentos de Biocatálisis. Nuevos enfoques en Ciencia y Tecnología*. ISBN 978-987-558-221-7. E. Lewkowicz (Ed). Universidad Nacional de Quilmes (UNQ). Argentina. **2011**, pp. 191-213. (in Spanish).

37.- **Domínguez de María, P.***, Shanmuganathan, S. “Umpolung catalysis in Benzoin-type and Stetter-type reactions: From enzymatic performances to biomimetic organocatalytic concepts”. *Current Organic Chemistry*. **2011**, 15, 2083-2087.

36.- **Domínguez de María, P.*** “Recent developments in the biotechnological production of hydrocarbons: Paving the way for bio-based platform chemicals”. *ChemSusChem*. **2011**, 4, 327-329.

35.- **Domínguez de María, P.***, Maugeri, Z. “Ionic Liquids in Biotransformations: From proof-of-concept to emerging deep-eutectic-solvents”. *Current Opinion in Chemical Biology*. **2011**, 15, 220-225.

34.- **Domínguez de María, P.***, Bracco, P., Castelhana, L.F., Bargeman, G. “Influence of the organocatalyst in the aldol / Mannich-type product selectivities in C-C bond forming reactions”. *ACS Catalysis*. **2011**, 1, 70-75.

2010

33.- Shanmuganathan, S., Natalia, D., van den Wittenboer, A., Kohlmann, C., Greiner, L.*, **Domínguez de María, P.*** "Enzyme-catalyzed C-C bond formation using 2-methyltetrahydrofuran (2-MTHF) as (co)solvent: Efficient and bio-based alternative to DMSO and MTBE". *Green Chemistry*. **2010**, 12, 2240-2245.

32.- Shanmuganathan, S, Greiner, L., **Domínguez de María, P.*** "Silica-immobilized piperazine: A sustainable organocatalyst for aldol and Knoevenagel reactions". *Tetrahedron Letters*. **2010**, 51, 6670-6672.

31.- vom Stein, T., Grande, P.M., Sibilla, F., Commandeur, U., Fischer, R., Leitner, W., **Domínguez de María, P.*** "Salt-assisted organic acid-catalyzed depolymerization of cellulose". *Green Chemistry*. **2010**, 12, 1844-1849.

30.- **Domínguez de María, P.*** "Minimal Hydrolases: Organocatalytic ring-opening polymerizations catalyzed by naturally-occurring carboxylic acids". *ChemCatChem*. **2010**, 2, 487-492.

29.- **Domínguez de María, P.***, van Gemert, R.W., Straathof, A.J.J., Hanefeld, U*. "Biosynthesis of ethers: Unusual or common natural events?". *Natural Products Reports*. 2010, 27, 370-392.

28.- Hoyos, P., Sinisterra, J.V., Molinari, F., Alcántara, A.R.*, **Domínguez de María, P.*** "Biocatalytic strategies for the asymmetric synthesis of α -Hydroxy Ketones". *Accounts of Chemical Research*. **2010**, 43, 288-299.

2009

27.- Hoyos, P., Sinisterra, J.V., **Domínguez de María, P.**, Alcántara, A.R. "Hydrolase-based synthesis of enantiopure α -hydroxy-ketones: From racemic

resolutions to chemo-enzymatic dynamic kinetic resolutions". In "*Biotechnology: Research, Technology and Applications*". Nova Science Publishers, Inc. NY, USA. **2009**, pp 97-119 (Chapter 4).

26.- Domínguez de María, P.*, Martinsson, A. "Ionic Liquid-based method to determine the degree of esterification in cellulose fibers". *The Analyst*, **2009**, 134, 493-496.

25.- Gamenara, D.*, **Domínguez de María, P.*** "*Candida* spp. redox machineries: An ample biocatalytic platform for practical applications and academic insights". *Biotechnology Advances*, **2009**, 27, 278-285.

24.- Domínguez de María, P.*, Fernández-Álvaro, E., ten Kate, A., Bargeman, G. "Role of apparent pK_a of carboxylic acids in lipase-catalyzed esterifications in biphasic systems". *Journal of Molecular Catalysis B: Enzymatic*. **2009**, 59, 220-224.

2008

23.- Domínguez de María, P.* "Nonsolvent applications of Ionic Liquids (RTILs) in Biotransformations and Organocatalysis". *Angewandte Chemie International Edition*. **2008**, 47, 6960-6968; "*Nonsolvents - Anwendungen von ionischen Flüssigkeiten bei Biotransformationen und in der Organokatalyse*". *Angewandte Chemie*, **2008**, 120, 7066-7075.

22.- Beloqui, A., **Domínguez de María, P.**, Golyshin, P., Ferrer, M. "Recent trends in industrial microbiology". *Current Opinion in Microbiology*, **2008**, 11, 240-248.

21.- Zoumpantioti, M., Parmaklis, P., **Domínguez de María, P.**, Stamatis, H., Sinisterra, J.V., Xenakis, A. "Esterification and reactions catalyzed by lipases immobilized in organogels. Effect of temperature and substrate diffusion". *Biotechnology Letters*, 2008, 30, 1627-1631.

20.- Kourist, R., **Domínguez de María, P.**, Bornscheuer, U.T. "Enzymatic synthesis of optically active tertiary alcohols: Expanding the biocatalysis toolbox". *ChemBioChem*, **2008**, 9, 491-498.

19.- **Domínguez de María, P.**, Stillger, T., Pohl, M., Kiessel, M., Liese, A., Gröger, H., Trauthwein, H. "Enantioselective C-C bond ligation using recombinant *E. coli* Whole Cell biocatalysts". *Advanced Synthesis & Catalysis*, **2008**, 350, 165-173.

2007

18.- **Domínguez de María, P.***, García-Burgos, C.A., Bargeman, G., van Gemert, R.W. "Pig Liver Esterase (PLE) as biocatalyst in organic synthesis: From nature to cloning and to practical applications". *Synthesis*, **2007**, 10, 1439-1452.

17.- **Domínguez de María, P.**, Pohl, M., Gocke, D., Gröger, H., Trauthwein, H., Stillger, T., Wallter, L., Müller, M. "Asymmetric synthesis of aliphatic 2-hydroxy-ketones by enzymatic carbonylation of aldehydes". *European Journal of Organic Chemistry*, **2007**, 18, 2940-2944.

2006

16.- Carboni-Oerlemans, C.*, **Domínguez de María, P.***, Tuin, B., Bargeman, G., van der Meer, A.B., van Gemert, R.W. "Hydrolase-catalysed synthesis of peroxycarboxylic acids: biocatalytic promiscuity for practical applications". *Journal of Biotechnology*, **2006**, 126, 140-151.

15.- **Domínguez de María, P.**, Sinisterra, J.V., Tsai, S.W., Alcántara, A.R. "*Carica papaya* lipase: an emerging and versatile biocatalyst". *Biotechnology Advances*, **2006**, 24, 493-499.

14.- Domínguez de María, P., Alcántara, A.R., Carballeira, J.D., de la Casa, R.M., García-Burgos, C.A., Hernáiz, M.J., Sánchez-Montero, J.M., Sinisterra, J.V. "Candida rugosa lipase: A traditional and complex biocatalyst". *Current Organic Chemistry*, **2006**, 10, 1053-1066.

13.- Domínguez de María, P., Sinisterra, J.V., Sánchez-Montero, J.M., Lotti, M., Valero, F., Alcántara, A.R. "Acyl transfer strategy for the biocatalytical characterisation of *Candida rugosa* lipases in organic solvents". *Enzyme and Microbial Technology*, **2006**, 38, 199-208.

12.- Domínguez de María, P., Stillger, T., Wallert, S., Pohl, M., Gröger, H., Drauz, K.H., Trauthwein, H., Liese, A. "Preparative enantioselective synthesis of benzoin and (*R*)-2-hydroxy-1-phenylpropanone by using benzaldehyde lyase". *Journal of Molecular Catalysis B: Enzymatic*. **2006**, 38, 43-47.

11.- Domínguez de María, P., Sánchez-Montero, J.M., Sinisterra, J.V., Alcántara, A.R. "Understanding *Candida rugosa* lipases: an overview". *Biotechnology Advances*, **2006**, 24, 180-196.

2005

10.- Domínguez de María, P.*, Carboni-Oerlemans, C.*, Tuin, B., Bargeman, G., van der Meer, A.B., van Gemert, R.W. "Biotechnological applications of *Candida antarctica* lipase A: State-of-the-art". *Journal of Molecular Catalysis B: Enzymatic*, **2005**, 37, 36-46.

9.- Wallert, S., Drauz, K., Grayson, I., Gröger, H., **Domínguez de María, P.**, Bolm, C. "Ionic liquids as additives in the pig liver esterase (PLE) catalysed synthesis of chiral disubstituted malonates". *Green Chemistry*, **2005**, 7, 602-605.

8.- **Domínguez de María, P.**, Kossmann, B., Potgrave, N., Buchholz, S., Trauthwein, H., May, O., Gröger, H. "Improved process for the enantioselective hydrolysis of prochiral diethyl malonates catalyzed by Pig Liver Esterase". *Synlett*, **2005**, 11, 1746-1748.

7.- **Domínguez de María, P.**, Sánchez-Montero, J.M., Alcántara, A.R., Valero, F., Sinisterra, J.V. "Rational strategy for the production of new crude lipases from *Candida rugosa*". *Biotechnology Letters*, **2005**, 27, 499-503.

2004

6.- Alcántara, A.R., **Domínguez de María, P.**, Fernández, M., Hernáiz, M.J., Sánchez-Montero, J.M., Sinisterra, J.V. "Resolution of racemic acids, esters and amines by *Candida rugosa* lipase in slightly hydrated organic media". *Food Technology Biotechnology*, **2004**, 42, 343-354.

5.- **Domínguez de María, P.**, Xenakis, A., Stamatis, H., Sinisterra, J.V. "Unexpected reaction profile observed in the synthesis of propyl laurate when using *Candida rugosa* lipases immobilized in microemulsions based organogels". *Biotechnology Letters*, **2004**, 26, 1517-1520.

4.- **Domínguez de María, P.**, Xenakis, A., Stamatis, H., Sinisterra, J.V. "Lipase Factor (LF) as a characterization parameter to explain the catalytic activity of crude lipases from *Candida rugosa*, free or immobilised in microemulsion-based organogels". *Enzyme and Microbial Technology*, **2004**, 35, 277-283.

1999-2003

3.- **Domínguez de María, P.**, Martínez-Alzamora, F., Pérez Moreno, S., Valero, F., Rúa, M.L., Sánchez-Montero, J.M., Sinisterra, J.V., Alcántara, A.R. "Heptyl oleate synthesis as useful tool to discriminate between lipases, proteases and other hydrolases in crude preparations". *Enzyme and Microbial Technology*, **2002**, 31, 283-288.

2.- de Castro, M.S., **Domínguez de María, P.**, Sinisterra, J.V. “Enzymatic amidation and alkoxyacylation of amines using native and immobilised lipases with different origins: a comparative study”. *Tetrahedron*, **2000**, 56, 1387-1391.

1.- **Domínguez de María, P.**, Sinisterra, J.V. “Causes of unreproducibility of *C. rugosa* lipase-catalyzed reactions in slightly hydrated organic media”. *Tetrahedron*, **1999**, 55, 8555-8566.